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PATENT APPLICATION OF  
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MOTORCYCLE ENGINE GUARD AND FOOT PEG

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## MOTORCYCLE ENGINE GUARD AND FOOT PEG

This application refers to and claims  
priority on U.S. Provisional Application Serial No.  
5 60/526,038 filed December 1, 2003, which is hereby  
incorporated by reference.

### BACKGROUND OF THE INVENTION

The present invention relates to an engine  
guard that attaches to the front frame of a  
10 motorcycle and which has laterally extending  
generally horizontal rails on which a folding foot  
peg is mounted that will be usable as a foot rest in  
both an extended or displayed position where the foot  
rest extends outwardly from the engine guard, and in  
15 a folded or stowed position where the foot pegs nest  
into a provided receptacle on the respective engine  
guard rails.

Various types of foot pegs for motorcycles  
have been advanced in the past, as well as various  
20 engine guards. One type of engine guard is shown in  
U.S. Design Patent No. Des. 348,422, where the engine  
guard is clamped to the front members of a motorcycle  
frame, and extend outwardly to provide a foot rest,  
with enlarged balls fixed at the ends of outwardly  
25 extending portions.

A foot rest for a motorcycle frame that has  
a laterally extending guard portion and folding  
pedals at the outer ends is shown in U.S. Patent No.  
3,794,353. In this instance, the pedals are pivoted  
30 and will fold from a horizontal position to a

vertical position. When in the vertical position, the pedals protrude upwardly from the foot rest frame and can cause interference.

Another type of an engine guard and foot  
5 rest arrangement is shown in U.S. Design Patent No. Des. 270,527. The foot rests appear to be permanently fixed in place.

U.S. Design Patent No. D361,311 also shows an engine guard and foot rest with annular anti-slip  
10 rings for placing the rider's feet on horizontal portions of the foot rest.

#### SUMMARY OF THE INVENTION

The present invention relates to an engine guard for a motorcycle that is fixed to and extends  
15 laterally from the front end of the frame of a motorcycle to the opposite sides of the frame. The engine guard has rails or sections that are generally horizontal on which a foot of the rider can rest. At the outer ends of the horizontal sections, foot pegs  
20 are pivotally mounted. The foot pegs will pivot from a deployed position extending outwardly from the engine guard to a stowed position where they are folded inwardly and overlie portions of the generally horizontal rail. When folded inwardly, the foot pegs  
25 are received in receptacles formed in the rails of the engine guard, so that they nest in place and do not substantially enlarge the outer size of the engine guard rail when they are folded.

The foot pegs of the present invention can be used as foot rests in either the stowed or folded portions or in the unfolded or deployed position. Suitable anti-slip members are provided on the surfaces of the foot pegs that are exposed for supporting a riders feet in either one of the two positions.

#### BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a front perspective view of an engine guard made according to the present invention with a schematic representation of a motorcycle frame for illustrative purposes;

Figure 2 is a rear perspective view of one side of the engine guard shown in Figure 1 with the peg in its "stowed" or nested position;

Figure 3 is a rear perspective view similar to Figure 2 with the foot peg in its deployed position;

Figure 4 is a sectional view taken on line 4--4 in Figure 2;

Figure 5 is a sectional view taken on line 5--5 in Figure 3;

Figure 6 is a sectional view taken on line 6--6 in Figure 3; and

Figure 7 is a perspective view similar to Figure 1 showing a modified combined engine guard and foot peg bracket.

#### DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring to Figure 1, a motorcycle frame is shown very fragmentarily for reference purposes at 10, and as it can be seen, it has forward end frame members 12 that extend upwardly from lower frame pipes 13. The forward end frame members 12 taper together toward the top and are held with a bracket 14 relative to a horizontal frame member 16. A motor 18 that is shown only schematically, is mounted on the frame members in the lower portion of the frame, and is used for powering the motorcycle in a normal manner. A fork retainer sleeve 20 is at the front end of the horizontal frame member 14. The motorcycle is assembled in a normal manner.

A combined engine guard and folding foot peg bracket made according to the present invention is illustrated at 22. The engine guard 22 has lower support struts 24, 24 on opposite sides of the frame 10. The lower end of the struts carry brackets 26 that bolt to the frame lower pipes 13 with suitable bolts 28 as shown in Figure 1. The struts 24 taper upwardly on the opposite sides of the frame, and each strut has an upwardly extending portion 30, on which a pivot and connector support bracket 32 is mounted.

The brackets 32 in turn are each connected to a separate generally horizontal rail section 34. The rail sections 34 are connected to support pipes 36 on each side of the frame. The support pipes 36 taper upwardly toward the junction of the frame members 12. A support plate 38 is secured to the

upper ends of the support pipes 36. The plate 38 is used to connect the upper end of the engine guard to the frame 10 with a suitable fastener 40. This fastener arrangement for fastening plate 38 to the frame can be of any desired type, but generally, the top of the engine guard is clamped in place, or the fastener 40 can be threaded into openings on portions of the frame, or held on another type of bracket.

The present invention includes a pair of pivoting, folding foot pegs 42, one on each side of the motorcycle, and the foot pegs 42, are each pivotally mounted about a pivot axis 44 on the opposite sides of the motorcycle to the respective connector and pivot and peg support bracket 32. The brackets 32 are at the outer ends of the horizontal rails 34 and extend inwardly to form an open top saddle for the foot pegs. The brackets 32 are bifurcated at the outer end to provide a pair of spaced side members 46, 46, as shown in Figure 6. The foot pegs 42 each have a central core or bolt 52 that has an ear portion 48 that fits between the respective side members 46, and is contoured and of size so that it will pivot about the pivot axis 44. The pivot axis 44 is formed with a suitable pivot bolt 50.

The foot pegs 42 are configured as desired and generally are so that they will pivot from an open or deployed position shown in Figures 1 and 3 to a stowed position as shown in Figure 2.

The pivot ears 48 of the foot pegs 42 are part of a respective cylindrical core or bolt 52 of the foot peg, as shown in Figure 5. The core has a threaded end and can support first foot peg sections 5 53 at end walls formed on section 53. The section 53 can be of a suitable material, such as die cast metal. A longitudinally extending cap 54 is also attached to the core or bolt 52. The cap 54 may be made of hard rubber and will be on the upper side of 10 the rail when the foot peg is in its stowed position as shown in Figure 2. The foot peg assembly can be made in any desired manner, length and style. When the foot peg 42 is in its deployed position, the section 53 has a part cylindrical surface facing 15 upwardly. This part cylindrical surface and the wall having the surface have a plurality of longitudinal anti-slip grooves 56 formed in the surface.

When the foot peg 42 is deployed, as shown in Figures 1 and 3, there will be an irregular 20 surface on the foot peg on which the rider's feet can rest.

Each of the caps 54 on the foot pegs has a number of ribs 60 that extend longitudinally along the foot peg to provide for an anti-slip surface when 25 the foot pegs are in the stowed or folded position.

Figure 1 shows a modified form of the anti-slip or anti-skid surface on the foot peg, comprising part annular grooves 64 on the side that is up when the foot peg is deployed as shown in Figure 1, and

part annular ribs 66 on the cap 54, that would be on the top when the foot peg is pivoted to its stowed position.

It can be seen in Figures 1, 2, 4 and 5 that each of the brackets 32 at the outer ends of the horizontal rails 34 forms a pocket or a recess 62 that extends from the outer end inwardly for a sufficient length to receive the respective foot peg 42 when the foot peg is stowed. The cap 54 is on the top of the foot peg in the stowed position and is about the same size as the rail 34. The recess 62 in each bracket 32 is formed by a part cylindrical lower wall 68 joining the wall of the rail 34. The inner end of the recess is closed with an end wall 70 that blends in with the respective rail 34 and the wall 70 at the inner ends of brackets 32 can be bolted to fittings to join it to the rail.

It is important to note therefore that the foot peg is usable, and is positioned generally horizontally (or at suitable angles) in both its deployed and stowed positions, and the two positions result in the feet being farther away from the frame in the deployed position. Nonetheless, the feet are supportable in the deployed position as well as in the stowed position of the foot pegs.

The tubes or pipes used to make the engine guard can be all chrome plated. The foot pegs themselves can be made in other variations, but include a pivot ear that is pivotally mounted on a



suitable pivot axis, and will nest into a receptacle in the horizontal rail section or portion of the engine guard.

The support for the engine guard to the frame also can be of any desired type. Separate side members comprising horizontal rail portions 34 and strut portions 24 can be supported on one side of frame 10 independently of the rail and strut on the other side of the frame.

Referring to Figure 7, a modified engine guard and folding foot peg support or bracket 80 is shown on a schematically illustrated motorcycle frame 82. The engine guard 80 is made of several components, including a central mounting bracket 84 that can be forged or otherwise formed separately.

The bracket 84 has an opening at the top for a fastener 86, to secure it to the frame 82 in a known manner. The bracket 84 has diverging tube sections 88 piloted thereon and welded in place. The tube sections 88 join downwardly extending curved tubes 90.

The curved tubes 90 are joined to horizontal foot peg support rails 92 through elbow brackets 94. The elbow brackets are separately formed, and welded to the tubes. The foot peg support rails 92 have connector brackets 95 at outer ends thereof which have spaced pivot flanges 96 to which foot pegs 98 are pivoted. Foot pegs 98 are pivoted to the flange with pivot pins 100.

The brackets 95 have downwardly extending portions that join lower bent tubes 102 that in turn join inwardly extending tube sections 104. The inner ends of the tube sections 104 are joined to lower  
5 members of the motorcycle frame 82, and suitably bolted or otherwise fastened in place.

The horizontal rail sections 92 are provided with upwardly open, part cylindrical pockets 108. The foot pegs 98 are shown pivoted outwardly  
10 from the rail sections 92 to a stopped position to be used in a wide foot position. The support ears 110 on the foot pegs 98 positioned between the flanges 96 will engage a cross surface at the base of the flanges, which acts as a stop for the foot pegs.

15 The foot pegs fold into the respective pockets or receptacles 108 for use in a more narrow foot position. The foot pegs remain exposed on the open top of the receptacles for use as foot rests. The foot pegs can thus be used in two positions by  
20 quickly moving them between the inner and outer positions about the pivot pin.

The horizontal rails 92 also can be used for supporting lights 112, if desired. Other accessories can be mounted on the engine guard and  
25 foot peg support, so long as the accessories do not interfere with foot peg folding and use.

The second form of the invention shows a modified design, with the same functions as folding foot pegs. The engine guard and foot peg supports can

be tube sections welded together or formed in fewer parts than those shown, as desired.

Different curves and curvature designs can be utilized. Lights can be supported on the  
5 horizontal rail portions if desired, as well.

A very neat appearing engine guard is provided, and the engine guard supports foot pegs that will fold to a completely stowed and substantially unobtrusive position in a recess or  
10 receptacle in a horizontal rail portion of the engine guard. The foot pegs will pivot to extend outwardly from the engine guard. The foot pegs will pivot to extend outwardly from the engine guard for supporting the feet of a motorcycle rider. The incorporation of  
15 foot pegs into an engine guard places the use in either a wide spacing or a reduced width.

Although the present invention has been described with reference to preferred embodiments, workers skilled in the art will recognize that  
20 changes may be made in form and detail without departing from the spirit and scope of the invention.